Streamlining Authorization Bases For Accelerated Closure

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Agenda

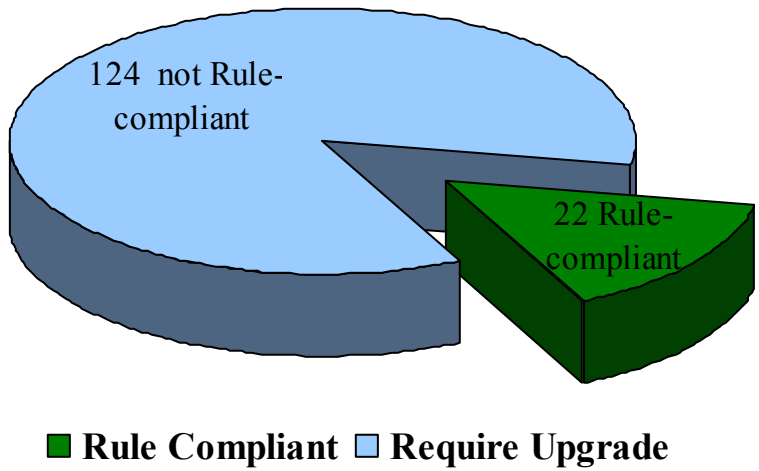
- What's the Problem
- EM-1's Initiative
  - Workshops
  - Products
  - Future Actions
- RL Strategy
  - Nuclear Safety Criteria
  - SARAH/RADIDOSE
- Key Products
  - DD&D DSA
  - 1120 DSA
  - WM DSA

EM's Rule Compliance Problem

(10/01)

Of **146** EM Hazard Category 2 & 3 Nuclear Facilities

Only **22** have Rule-compliant DSAs



- **EM and NNSA have significant numbers of non-compliant DSAs**
- **April '03 deadline is unnecessary for facilities awaiting deactivation, decommissioning, and demolition (DD&D) / new mission**
- **Compliance for compliance sake adds little value**
- **Complex has insufficient resources**
- **Revision / implementation of new DSAs by 4/03 diverts valuable resources from risk reduction missions**
- **Current DSAs are not configured for DD&D**

EM-1 Strategy: Better, Faster, Cheaper

- 124 non-compliant DSA – 4/03 rapidly approaching
- EM-1 Memo of January 2002
  - Commissioned Gubanc to find ways to do it Better, Faster, Cheaper
  - Initiated effort to identify DSA models for use EM-wide

EM-1 Washington DC Workshops

- Streamline and clarify exemption process
- Streamline DSA review/approval process (6 sigma)
- Identify method to downgrade to < HC 3
- Develop guidance on DSA implementation

EM-1 Rocky Flats Workshops

- Address inactive underground waste sites
- Standardize safety analysis tools
  - SARAH (RF)
  - RADIDOSE (RF)
  - DOE Accident Analysis Handbook (NNSA)
  - RSAC (INEEL)
- Develop DSA guidance for Decommissioning
- Address use of “step-out” criteria for TSR’s

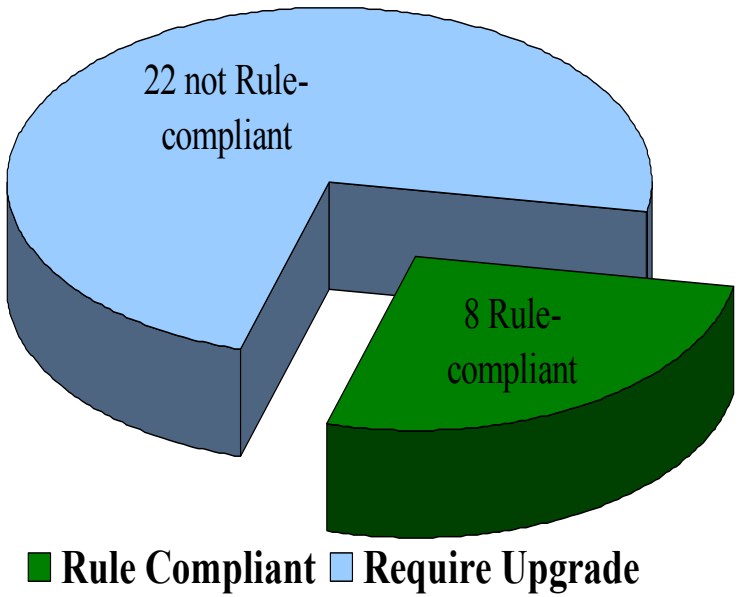
Products of Workshops

- EM process/expectations for exemptions defined and clarified
- Draft guidance on implementation of DSA following DOE approval
- Draft EM-1 memo declaring final hazard categorization of < HC 3 for inactive underground waste sites

Future Actions

- Finalize workshop guidance/direction and issue
- Complete development of RL SARAH/RADIDOSE and share
- Complete development of 1120 DSA (RL)
- Complete accident analysis handbook (NNSA)

RL's Rule Compliance Problem



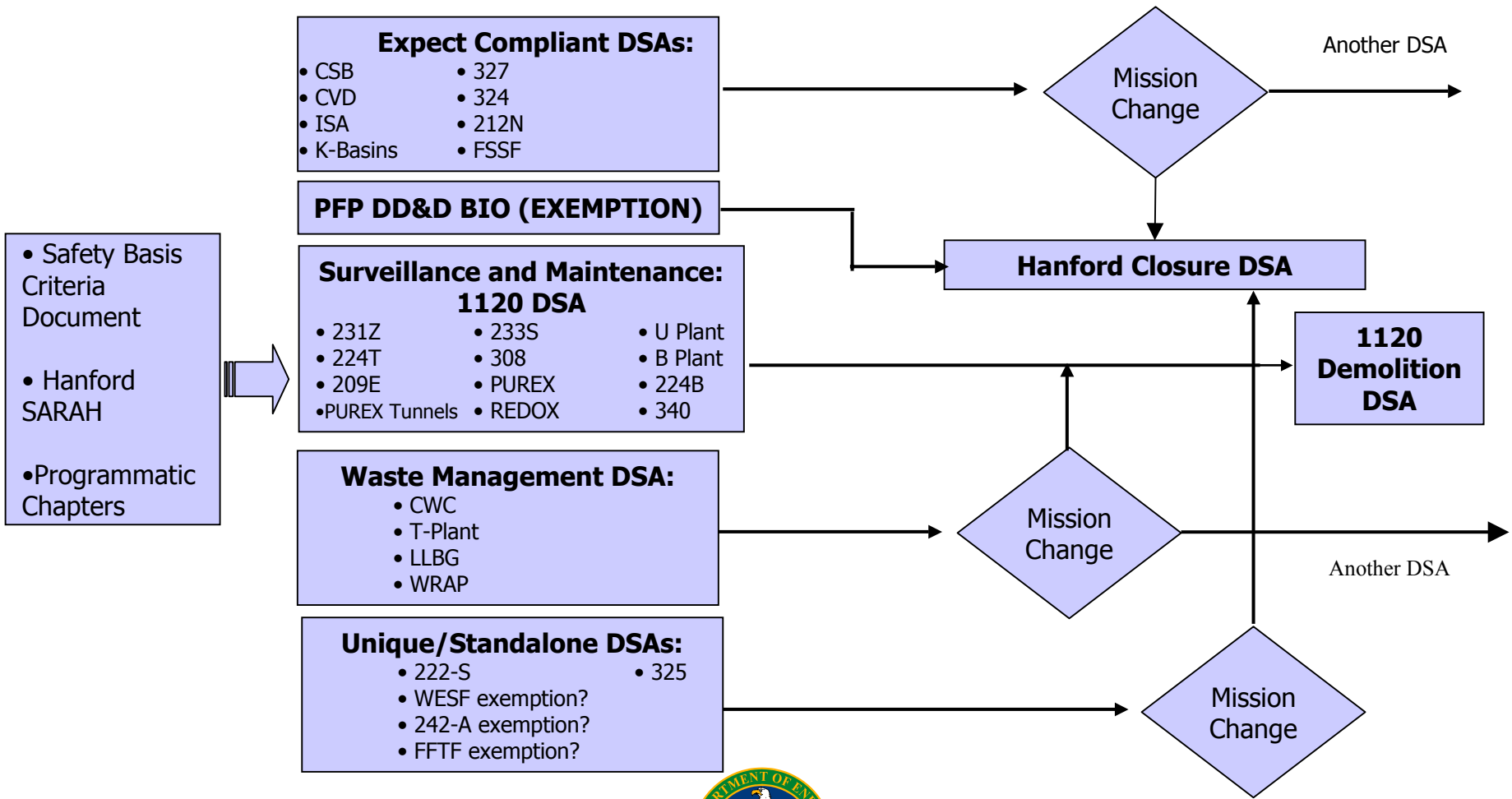
Problem

- **22 of 30 Haz Cat 2&3 nuclear facilities are non-compliant to Rule**

Hanford Accelerated Closure Nuclear Safety Strategy

- Consolidate, integrate, standardize DSAs along mission lines
  - Surveillance and Maintenance DSA (1120)
  - Waste Management (graded 3009)
  - "Just-in-time" DD&D DSA (3011)
  - Few Unique DSAs
  - Exemptions (3)
- Issue Safety Basis Criteria, RL's SARAH, RADIDOSE
- Create Standardized DSA Programmatic Chapters
- Use Rule Compliant DSAs from other sites (e.g. Rocky Flats)

Hanford Accelerated Closure Nuclear Safety Strategy



Nuclear Safety Strategy Benefits

- Reduces total number of DSAs to develop/maintain
- Groups facilities with similar missions and hazards
- Saves time and money ($12M to < $4M)
- Establishes consistency
- Simplifies implementation
- Enhances workforce flexibility
- Common analysis and general information established/written once
- Creates predictability – minimizes review cycle

Key Products

- Inactive Waste Sites Complex-Wide Hazard Categorization
- Standardized Safety Analysis -- SARAH/RADIDOSE
- DD&D Master DSA Template
- 1120 DSA Template
- Waste Management Master DSA Template
- DOE-STD-1027 Clarified
- Exemption Process Streamlined

DD&D Master DSA Template For DOE Complex

- Develop master DD&D DSA (start w/RF's DD&D BIO)
- Common Sections
  - Describe common elements to all facilities (physical characteristics, activities, credited elements of Safety Management Program)
  - Define methodology applied to evaluate hazards and develop controls (activities, initiators and hazards common to facilities)
  - Set common controls for similar functions (TSRs)
  - Establish criteria to back out of TSR controls as move through DD&D
- Facility Appendix
  - Describes anomalies, unique/specific applications
  - Identifies differences from common analysis
  - Evaluates at the facility's specific location to determine safety class/safety significant SSCs
  - Identifies credited safety program elements that support analyses or assumptions
  - Uses an applicability matrix to apply controls

Benefits of DD&D DSA

- Defines closure baseline
- Steps down TSR controls from Hazard Category 2 to end state in a pre-approved fashion
- Re-categorizes facility automatically as hazard is removed
- Improved planning
- Establishes functional criteria to support removal of permanent equipment
- Can be used at other DOE sites

1120 DSA Strategy

- RL developed STD-1120 DSA Criteria Guide
- Contractor evaluates existing non-compliant DSAs against this guide
- Provide gap analysis plus add'l info as required to meet guide
- DOE SER demonstrates:

  existing DSA + add'l info = 1120 compliant DSA

Waste Management Master DSA

- Develop template for sites to manage wastes under single compliant master DSA
- Build Waste Management Master DSA based on RF approach
- Simplified, integrated approach to developing DSA for a wide range of waste management facilities
  - Reduced number of DSA
  - Reduced number of accident analyses
  - Integrated and standardized control suite

NEXT STEPS:

- EM-HQ's guidance/direction (IWSs)
- Complete 1120 Gap Analysis
- Finalize SARAH/RADIDOSE
- Develop WM DSA, PFP DD&D BIO
- Submit Exemptions (2-3 more)
- Submit to EM-HQ Implementation Schedule
- Develop 2-3 unique DSAs (222S, 325, 242A)

Exemption Process Streamlined

- Ensure a streamlined exemption process exists, and establish clear contractor expectations
- New Exemption process – reduces number of personnel involved by about 50%
- Clear Expectations established for contractors submitting exemptions on additional content needs

DOE-STD 1027 Clarified

- Address ambiguities in the application of DOE-STD-1027 under the Rule
- Request EH to revise threshold criteria based on consistent application of models
- Clarify final categorization may be performed without creating a new DSA
- Affirms key basis and interpretation letters prior to the rule (10 Rem at 30 Meters)

Inactive Waste Sites Complex-Wide Hazard Categorization

- Path forward for inactive waste sites and groundwater under the Rule
- Issue a final hazard categorization for all inactive waste sites and groundwater that specifies that these facilities are less than Hazard Category 3
- Eliminate low-value hazard categorizations and DSA development for waste sites already subject to regulation under CERCLA and RCRA

Standardized Safety Analysis – SARA/RADIDOSE

- Reduces the cost of safety analysis and reduce the approval time through standardized safety analysis methods and tools
- Uses RFs Safety and Risk Analysis Handbook (SARAH) for standard accident analysis input parameters and methods
- Standardizes dose calculations using RADIDOSE to reduce accident analysis costs
- Improves predictability in review process